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ABSTRACT

Population education is the focus of this quinmester curriculum guide for secondary students. By examining and comparing past population theories of Malthus and Marx with present theories students will better understand the present situation, cultural attitudes toward the problems, and the ecological consequences of overpopulation. Objectives are for students to: 1) be aware of available information sources on population education; 2) explain the implications of demographic transition; 3) analyze changes that have taken place in birth and death rates; 4) devise a method to illustrate the effect of migration on population distribution of an area; 5) calculate and predict the population growth of selected nations; 6) generalize from given data the economic effects of population growth; 7) cite hazards of unrestricted population growth; 8) predict actions to stabilize population problem. The guide is divided into sections on broad goals, content outline, objectives and learning activities, and materials. (SJM)

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AUTHORIZED COURSE OF INSTRUCTION FOR THE QUINMESTER PROGRAM

SO 005 275

SOCIAL STUDIES

THE PROBLEM IS PEOPLE

6425.07
6416.30

DADE COUNTY PUBLIC SCHOOLS

DIVISION OF INSTRUCTION • 1971

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by
Frank Ratchford

for the

Division of Instruction
Dade County Public Schools
Miami, Florida
1971

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INTRODUCTION

This course of study was written as a part of a total effort to revise curriculum to fit the quinmester administrative organization of schools. The materials and information in this guide are meant to be neither all-inclusive nor prescriptive; but rather, an aide to teachers as they plan instructional programs, taking into account student needs and characteristics, available resources, and other factors.

The major intent of this publication is to provide a broad framework of goals and objectives, content, teaching strategies, class activities, and materials all related to a described course of study. Teachers may then accept the model framework in total or draw ideas from it to incorporate into their lessons.

The guide is divided into 1) a broad goals section, 2) a content outline, 3) objectives and learning activities, and 4) materials. The first section provides descriptive and goal-oriented information for the teacher; "indicators of success" refers to suggested prerequisite or corequisite experiences. The content outline illustrates, in general terms, the scope and major subdivisions of the course. The objectives and learning activities section, hopefully, provides a total picture of the concept or main idea and specific behavioral objectives for a set of given learning activities. The materials section of the guide lists resources in four categories: essential textual or other material; alternate classroom materials to use in place of or in addition to the aforementioned; supplementary teacher resources; and supplementary student resources. The appendix may include other material appropriate for a specific course: e.g., pretests, readings, vocabulary, etc.

Anyone having recommendations relating to this publication is urged to write them down and send to : Social Studies Office, Room 306, Lindsey Hopkins, A-1.

James A. Fleming
Social Studies Consultant

COURSE DESCRIPTION: A STUDY OF THE POPULATION EXPLOSION. EXAMINES PAST AND PRESENT THEORIES (MALTHUS, MARX, ERLICH). EMPHASIS IS ON UNDERSTANDING THE REALITIES OF THE PRESENT SITUATION, CULTURAL ATTITUDES TOWARD THE PROBLEM, AND THE ECOLOGICAL CONSEQUENCES OF OVER-POPULATION.

CLUSTER: GENERAL SOCIAL STUDIES

GRADE LEVEL: 10-12

COURSE STATUS: ELECTIVE

INDICATORS OF SUCCESS: NONE

RATIONALE: Someone has calculated that at the present rate of growth there would only be one square foot of land surface for every person in about six and a half centuries. No one really expects anything of this sort to happen, for in order to survive, man needs more than space on which to stand. But we have far more immediate problems facing us as a result of the present growth in population - problems that have to be met now.

COURSE OBJECTIVES:

1. THE STUDENT WILL DESCRIBE THE SOURCES OF INFORMATION AVAILABLE ON POPULATION.

2. THE STUDENT WILL COMPARE SELECTED PAST AND PRESENT POPULATION THEORIES.

3. THE STUDENT WILL EXPLAIN THE IMPLICATIONS OF THE DEMOGRAPHIC TRANSITION AS IT HAS OCCURED IN INDUSTRIAL NATIONS.

4. THE STUDENT WILL ANALYZE AND PROPOSE REASONS FOR THE CHANGES THAT HAVE TAKEN PLACE IN THE BIRTH AND DEATH RATES OF SELECTED COUNTRIES.

5. THE STUDENT WILL DEVISE A METHOD TO ILLUSTRATE THE EFFECT MIGRATION HAS ON THE POPULATION DISTRIBUTION OF AN AREA.

6. THE STUDENT WILL calculate PREDICT THE POPULATION GROWTH OF SELECTED NATIONS.

7. THE STUDENT WILL GENERALIZE FROM GIVEN DATA THE ECONOMIC EFFECTS OF POPULATION GROWTH.

8. THE STUDENT WILL CITE EVIDENCE TO SHOW THAT UNRESTRICTED POPULATION GROWTH MAY THREATEN OUR CIVILIZATION AND QUALITY OF LIFE.

9. THE STUDENT WILL PREDICT THE ACTIONS OF SOCIETY TO STABILIZE POPULATION.

10. THE STUDENT WILL and SUGGEST SOLUTIONS TO THE CURRENT POPULATION PROBLEM.

COURSE CONTENT OUTLINE:

I. Sources of Demographic Information

- A. Census
- B. Vital Statistics (registration)
- C. Uses and analysis of information

II. Population Theories

- A. Malthus
- B. Marx
- C. Ehrlich
- D. Zero Population Growth

III. Demographic Transition Curve

- A. Developed or industrial nations
- B. Developing nations
- C. Underdeveloped nations
- D. Natural Increase

IV. World Population Growth

- A. Birth and Death rates of various countries
- B. Reasons for death rate changes
- C. Reasons for birth rate changes
- D. Factors that affect birth rate
  1. Rural vs. Urban
  2. Religion and custom
  3. Educational level
  4. Industrialization of the country
  5. Age and rate of marriage
  6. Attitude of the government
  7. Infant mortality rate.

V. Migration

- A. International
- B. Internal
- C. Urbanization

VI. Population Growth of Selected Nations

- A. Percentage increase
- B. Time needed to double the population
- C. Population projections

VII. Economic Effects of Growing Population

- A. Food Production
- B. Economic Growth
- C. Age Composition
  1. School population
  2. Labor Force
- D. Military Needs
- E. Attitude of business

VIII. Problems of a rapidly growing population

- A. Use of natural resources
- B. Pollution
  1. Water
  2. Air
  3. Noise
- C. Space availability and allocation
- D. Food Production
  1. Use of pesticides
  2. Need for high yields
- E. Ecological Effects

(cont.)

COURSE CONTENT OUTLINE (cont.)

IX. Solutions to Population Growth

A. Actions of the United States Government
B. Family Planning throughout the world
C. Individual Efforts

X. Suggested Student Solutions to Population Growth

GOAL 1: THE STUDENT WILL DESCRIBE THE SOURCES OF INFORMATION AVAILABLE ON POPULATION.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
		NOTE: As an introduction to this course, it might be necessary for the teacher to discuss the topic of statistics. A number of students may not have had much experience in the interpretation of graphs, tables, charts, etc. The writer suggests using Expanding Table and Graph Skills, Book D, American Education Publications.
POPULATION STUDY (DEMOGRAPHY)	The student will describe the sources of information available on population.	1. Distribute a population questionnaire for the students to complete. Collect, tabulate and discuss results at a later date. (See Appendix A) 2. Introduce to the students the meaning of demography. (the study of population, its size, composition, distribution, and changes from time to time through the variables of fertility, martality and migration.) 3. Show and discuss the film Challenge to Mankind, or The Squeeze. 4. Prepare a bulletin board where students may place articles from various sources on population. Consider having students read and discuss the articles at regular intervals, perhaps whenever they are brought in. 5. Trace the history of census taking with the emphasis on the importance and need for accurate censuses in the United States. (i.e., representation) 6. Have available for each student a copy of the illustrative example of the 1970 U.S. census so that they can determine the type of information obtained from each family and individual. Have them discuss the conflict between a need for group statistical data and the individual right to privacy. (This example may be obtained from the U.S. Census Bureau).

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
		7. Utilize a member of the Florida Bureau of Vital Statistics as a resource person to explain the operation of this agency. 8. Give each student a copy of a State of Florida certificate of live birth. Have the student complete it as if it was his birth certificate except for the confidential section. Discuss the importance and usefulness of the data recorded. The places of birth of the student and his parents can be used to show migration. (This can be obtained from the Florida Bureau of Vital Statistics). 9. Use a sample or a transparency to show students the information put of death certificates, marriage certificates and absolute divorce or annulment certificates. Have students suggest ways in which such data is useful. 10. Discuss the importance and uses of census and vital registration data. In what way would the following persons use the data: School Superintendent? Water board member? Shopping center developer? Owner of a large manufacturing plant looking for a new plant location? City or county planner? Have the students identify other people who make use of census data and explain how they use it. 11. Have the students speculate how census data (and other sources) can be used to identify social problems (e.g. over population, slums, declining standard of living.) Sources for Goal 1: Films: Challenge to Mankind, 28'. McGraw Hill Contemporary Film Rental, 330 West 42 St. New York, New York. 10036. Rental. The Squeeze, 10',b/w (Dade County Film on order)

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
		Sources: (cont.) Forms: Illustrative example of 1970 U.S. Census obtain from U.S. Bureau of Census, Washington, D.C. State of Florida birth and other certificates obtain from Bureau of Vital Statistics, 1350 N.W. 14 St. Miami, Fla. Readings: R.C. Cook and J. Lecht, People, pp 7-16. L.H. Day and A.T.Day, Too Many Americans, pp45-74. L.B. Frankel, This Crowded World, pp 7-27. P.C. Glick, "The 1960 Census as a Source for Social Research," American Sociological Review, Aug. 1962, pp581-585. C. Taeuber, "Taking An Inventory of 180 Million People: The U.S. Census," in R. Freedman (ed.) Population: The Vital Revolution, pp 84-98.

GOAL 2: THE STUDENT WILL COMPARE SELECTED PAST AND PRESENT POPULATION THEORIES.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
POPULATION THEORIES.	The student will compare selected past and present population theories.	1. Describe life in the cities in the 17th and 18th centuries, especially the following factors: sanitation, water supply, living quarters for the factory workers, hours and conditions of work, wages, the diseases prevalent and food supply. 2. Prior to having the students read selections concerning past population theories identify and discuss the following concepts: a. Arithmetical progression b. Geometric progression c. Malthus' preventive checks to population (1) postpone marriage (2) moral restraint (3) vice d. Malthus' positive checks to population e. Epidemics prior to modern medical practices f. Fuedalism Divide the class into six groups for reading and reporting assignments to evaluate the ideas of early demographers and historians. Group 1 — Malthus, First Essay, Chapter One Group 2 — Malthus, First Essay, Chapter Four Group 3 — Malthus, First Essay, Chapter Five Group 4 — Karl Marx, Das Kapital, pages 690-696 Group 5 — Langer, "The Black Death." Group 6 — Zinsser, Rats, Lice and History, pages 111-122 (Sources: Groups one through three may use Malthus, Population: The First Essay or Malthus, et al, Three Essays on Population.)

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
	(cont.)	2. (cont.) Possible questions each group should consider are: Group 1. What factors motivated Malthus to write his essay? What is his position concerning man's ability to improve his position in life? Explain how Malthus thought population would increase and how man's ability to produce food would increase. Group 2. What are the two main checks to population and give an example of each? How does Malthus feel about the postponement of marriage and non-marriage? Group 3. How does Malthus feel about "parish laws?" Malthus believed that England's "poor laws" made the poor live in more deprived conditions. Why? Group 4. On what group did Marx place the blame for surplus population? What occurs to wages when the population in the cities increases? Group 5. What percentage of the population in some European countries died because of "Black Death?" What effect on the institution of feudalism did the plague have? Group 6. What disease does the article deal with? What were some of the influences of epidemic diseases in past wars? 3. After each group has reported the main ideas in the reading assignment, the following questions may be considered by the class. a. In Europe prior to 1700, the population increased very slowly. What factors were responsible for this? b. Thomas Malthus considered any type of birth control except abstinence a vice. What possible reasons did he have for this conclusion?

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
	(cont.)	3. (cont.) c. During wartime the most serious population losses are not associated with front line fatalities. For what reasons is this a valid statement both in the 1700's and today? d. Hans Zinsser maintains that history was shaped more by lice than generals. Explain what he means by this statement and present evidence to support his claim. e. Thomas Malthus has been called an "alarmist" by many people. Do you agree or disagree with this statement with supporting ideas from Malthus' essays. f. According to Karl Marx why wouldn't a Communist society have a population problem? 4. Use a transparency that shows projected world population or a chart similar to the one on page 12 in <u>This Crowded World</u>, and Paul Ehrlich's paragraph on "Carrying Capacity." (See Appendix B) Possible questions for discussion are: a. Are Ehrilch's ideas logical? b. In what way is Erlich's idea different from Malthus'? c. What, if any, is the difference between people and fruit flies? 5. Explain what is meant by zero population growth and how the world could reach such a condition? 6. Ask the students to write an opinion on Malthus' theory that the world's population will surpass the world's food supply. Have several students read theirs aloud and defend their position. Sources for Goal 2: <u>Readings</u>: L.H. and A.T. Day, <u>Too Many Americans</u>, pages 232 & 233.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES

Sources: (cont.)

Langer, W.L. "The Black Death," Scientific American, Feb. 1964, pp 114-121.

Malthus, T.R. Population: The First Essay, Ann Arbor Paperbacks, 1964, pp. 1-36.

New American Library (Mentor Books) 1960.

Marx, Karl. Das Kapital, Charles H. Kerr and Co., 1907 pp. 690-696.

Zinsser, Hans. Rats, Lice and History. New York: Bantam, 1967.

Supplementary Readings:

Defoe, Daniel, History of the Great Plague in London, Boston: Ginn & Co., 1896.

Dickens, Charles. Tale of Two Cities. London: The Zodiac Press, 1948.

Haggard, H.W. Devils, Drugs and Doctors. New York: Harper & Brothers, 1929, pp 179-211.

Pepys, Samuel. Diary, London: G. Bell & Sons, 1924, Vol. IV.

GOAL 3: THE STUDENT WILL EXPLAIN THE IMPLICATIONS OF THE DEMOGRAPHIC TRANSITION AS IT HAS OCCURRED IN INDUSTRIAL OR DEVELOPED NATIONS.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
DEMOGRAPHIC TRANSITION OF SEVERAL NATIONS.	The student will explain the implications of the demographic transition as it has occurred in industrial or developed nations.	1. Use as a transparency or handout to assist in an explanation of the demographic transition model. (See Appendix C) Stage one has a high birth rate and death rate (above 30/1000 crude birth and death rate) Is there any population explosion or problem at this stage? Why are the rates high? Stage two has a high birth rate but the death rate begins to decrease rapidly. What factors might cause the death rate to go down? Does a person make a personal decision to lower the death rate? What is happening to the population growth now? Is this growth a problem? Stage three has a low death rate and a birth rate that is approaching the death rate level. Why does the death rate level off? What changes in the culture and way of life might cause a declining birth rate? Is there a population explosion now? Stage four has an almost equal birth and death rate, a low level. What is the similiarity of stages one and four? What if the two rates remain the same for an extended period of time? The whole model. What area of the model represents population growth? At what stage is population growth the fastest? Compare the birth and death rates of selected countries and locate the country's position on the model. NOTE: Students should reach the generalization that all countries are following the demographic transition model.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
	(cont.)	2. Using the birth and death rates of some underdeveloped nations, the developing, and developed nations, locate their position on the demographic transition model. What generalization can be made? 3. Have students explain why some demographers are hopeful that the population problems in developing countries will become less critical. Consider that the demographers believe that all countries follow the demographic transition model. 4. Students will calculate the natural increase of selected countries. Birth rate/1000 minus Death rate/1000 = Natural increase/1000 Use statistics presented in World Population Data Sheet. Compare notes with data presented in a standard World Almanac. Sources for Goal 3: Chart: World Population Data Sheet, Population Reference Bureau, Washington, D.C. Also in People pages 60-63. Readings: R.C. Cook and Lecht, J., People, pp. 17-37. Frankel, L.B., This Crowded World, pp 29-42. Hauser, P.M. "The Population of the World: Recent Trends and Prospects" in R. Freedman (ed.) Population: The Vital Revolution. pp 15-28.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
	(cont.)	Sources: (cont.) Keyfitz, N. "Population Trends in Newly Developed Countries" in Ibid pp 149-165. Stolnitz, G.J. "The Demographic Transition: From High to Low Birth Rates and Death Rates" in Ibid, pp 30-47.

GOAL 4: THE STUDENT WILL ANALYZE THE CHANGES THAT HAVE TAKEN PLACE IN THE BIRTH AND DEATH RATES OF SELECTED COUNTRIES AND PROPOSE REASONS FOR THESE CHANGES.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
CHANGES IN BIRTH AND DEATH RATES	The student will analyze the changes that have taken place in the birth and death rates of selected countries and propose reasons for these changes.	NOTE: The sharp change in the birth rate as a nation becomes industrial and the change in the death rate in the 20th century especially in non-industrial countries. 1. Have students calculate birth and death rates. $\frac{\text{Births (in one year)} \times 1000}{\text{Population}} = \text{Birth Rate}$ $\frac{\text{Deaths (in one year)} \times 1000}{\text{Population}} = \text{Death Rate}$ (Use statistics presented in Vital Statistics of the United States or Statistical Abstract of the United States.) 2. Have students describe how these two rates are used to determine a nation's population growth rate. 3. Use a chart or transparency to show the history of the birth rates of the United States, England, Japan, Mexico and India. The student might do research to gather data for these charts. Analyze the data, suggest reasons and discuss why the changes, if any, took place. 4. For death rates follow the same procedure as in 3. 5. Have students select a country of state (perhaps for use throughout the course) for statistical population study. Have the students construct a birth rate and a death rate graph. Reasons should be proposed why changes took place when they did, and if a state is used, reasons for any great variance from the U.S. average. (Use the sources cited in activity 1, above.) 6. Using Bureau of Census publications compare the major causes of death in the United States in 1900 with the causes in

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
	(cont.)	6. (cont.) 1968 (or latest date available). What causes have increased? Decreased? Why? 7. Have the students brainstorm a list of problems that might occur when a nation experiences a drop in the death rate without a corresponding drop in the birth rate. (e.g. No established roles for large numbers of elderly people, population exceeds food production capacity, inadequate housing, overcrowded facilities, standard of living drops) As an example use Ceylon. See chart pate 47 in This Crowded World or page 35 in People. 8. Have students compare the birth rate of countries with more than 50% of the population living in the cities with those where less than 50% live there. Have the students hypothesize about the effect of urbanization on birth rates. (A good source is The Demographic Yearbook of the United Nations.) 9. Have students construct multi-line graphs illustrating the birth rate history of the following groups using their state or country. (See activity 5) using U.S. Bureay of Census or United Nations publications. a. Urban and rural b. White and other races (in U.S.) 10. Explain how customs and religions affect birth rates e.g., the high birth rate of the people of India. (One source of information is Too Many Americans, pages 77-130, and Population: The Vital Revolution pages 195-195) 11. Discuss in what ways the usual age of marriage and the percentage of women marrying influence the birth rate. (See Too Many Americans pp 21, 117, and Statistical Abstract of the United States.)

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
	(cont.)	12. Use a chart or transparency to show changes in infant mortality (death in first year of life) in the United States or some other country. Possible questions: a. Does a low infant mortality affect the future birth rate? In what way? b. How does a low rate affect the school population? 1. What effect would this have upon school systems? 2. What effect would this have upon the community? 3. What effect would this have upon you as a student? c. What are the possible reasons for the world-wide, present rate? d. Would a low infant mortality rate tend to make families want fewer children? Why or why not? 13. Compare the life expectancy of developed and under-developed countries. Use Population Reference Bureau's World Population Data Sheet. Is there a correlation between infant mortality rate and birth rate. NOTE: Students should generalize that countries with a longer life expectancy and a lower infant mortality rate have a lower birth rate and are the developed countries. 14. Students will list possible reasons for the birth rate of selected countries. Sources for Goal 4: Readings: Coale, A.J. "How a Population Ages or Grows Younger" in R. Freedman, (ed.) Population: The Vital Revolution, pp 47-58. Cook, R.C. and Lecht, J. People, pp 32-43. Day, L.H. and A.T., Too Many Americans, pp1-34 and 77-130.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
	(cont.)	Source : (cont.) National Center for Health Statistics, Vital Statistics of The United States. (Annually) Spiegelman, "Longevity and Mortality in the American Population" in Ibid pp 100-109 United Nations, The Demographic Yearbook of the United Nations. U.S. Bureau of the Census, Historical Statistics of the United States Colonial Times to 1957, and its Continuation to 1962 and Revisions. U.S. Bureau of the Census, Statistical Abstract of the United States. (Annually) Westoff, C.F., "The Fertility of the American Population" in Ibid pp 110-121. Whelpton, P.K., Campbell, A.A., and Patterson, J.E., Fertility and Family Planning in the United States, pp 69-124, 219-220, 272-275, 334-470.

GOAL 5: THE STUDENT WILL DEVISE A METHOD TO ILLUSTRATE THE EFFECT MIGRATION HAS ON THE POPULATION OF AN AREA.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
CONCENTRATION OF THE WORLD'S POPULATION.	The student will devise a method to illustrate the effect migration has on the population of an area.	1. Have the students determine the natural increase of the United States or a state and compare it with the actual population increase. Migration is the reason for the difference. 2. Clarify the meaning of international migration and internal migration. Have students explain how net migration is computed. Terms: Immigration, emigration. 3. Discuss urbanization of the United States. As a basis for discussion use one of the following: Filmstrip- Man, Builder of Cities ; Film, Cities, Why They Grow; Film, Megalopis, Cradle of the Future; Graph showing U.S. rural and urban population growth, see page 52 in People or a census map of population distribution of the United States. Possible questions are: a. Why do people continue to move into or near the present cities? b. What problems have been created by this movement into the cities? 4. Students will determine using an appropriate period of time (such as one year or time between census) if their state or country had a net in or out migration. (See objective 4, Activity 5.) Use U.S. Census or United Nations population statistics. 5. Students will show by a graph, a table, or model the increase or decrease in total population of a city or other area due to migration or they may show the change in racial composition of a city. Population (end of period) = Population (beginning) plus births minus deaths plus or minus net migration. (Use U.S. Census population statistics)

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
	(cont.)	6. Have the students brainstorm to create a list (for discussion) of the effects an increase of 1,000,000 people over the next ten years would have on Dade County. (e.g. housing requirements; need for additional parks, recreational facilities, and schools; water supply; hospitals; jails.) 7. Show filmstrip, Cities U.S.A., Guidance Associates or film Changing City, 16' C, #1-13299. 8. A recent trend in the interal migration pattern in the United States has been from the cities to the suburbs. Suggested questions for discussion or reports are: a. Why do people move to the suburbs? b. What effect has this movement had on the racial composition of the cities? c. How can the cities now adequately finance their operations? d. What transportation problems has this movement created? e. Is the United States using its available land wisely in the constant expansion of suburbs? Sources for Goal 5: Filmstrip: Man, Builder of Cities, Encyclopedia Britannica Educational Corp. Films: Cities, Why They Grow, 11 minutes, Coronet Films. Megapolis, Cradle of the Future 22', #1-10122. Cities and How They Grow, 11'BW, #1-00333. The City and the Future, 28'BW, #1-31223 The City, 30'BW, #1-31303. The City: As Man's Home, 28'BW, #1-31225.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
	(cont.)	Sources: (cont.) Readings: Cook, R. C. and Lecht, J., People pp 51-57. Day, L. H. and A. T., Too Many Americans, pp 45-74. Frankel, L. B., This Crowded World, pp 25-27, 53-57. Lee, E. S. "Internal Migration and Population redistribution in the Unied States," R. Freedman (ed.) Population: The Vital Revolution, pp 100-109. U.S. Bureau of Census, "Lifetime Migration Histories of the American People," Current Population Reports, Series P-23 no. 25, March 8, 1968. Vance, R. B. "The Growth of the American Population," in Ibid, pp 110-122.

GOAL 6: THE STUDENT WILL PREDICT THE POPULATION GROWTH OF SELECTED NATIONS.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
POPULATION GROWTH	The student will predict the population growth of selected nations.	1. Have the students calculate the percentage increase of various states or countries given the birth and death rate per 1000. Birth rate minus Death rate x 1/10 = % increase 2. Have the students compute the number of years that it takes for the population to double, if the percentage of increase is known. 70 divided by % increase = number of years to double. (Note: how one percentage change affects the time it takes the population to double.) 3. Use the 1960 and 1970 census information to find the number of years that it will take various states to double their population. Good examples for extremes are Florida, California, New York, Wyoming, and Mississippi. (Note: cities or counties could be used instead of states. For information use readings (c).) 4. Compare the information found in activity 3 above with the natural increase of the same area. Discuss the possible reasons for the in or out migration. Information from the 1970 census will enable the student to determine if any particular group (age, sex, race) left or moved to a given area. 5. Have the students graph the projected population of the world or selected countries in the year 2000 using varying percentages of population growth (such as one, two or three) 6. Have the students determine the present percentage of population growth of the United States, Brazil and Mexico; then plot the projected populations of these countries on a multiline graph in ten year periods from 1960 to 2030. Analyze the graph and discuss what may happen to these three country's

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
	(cont.)	6. (cont.) population during the student's life. Use World Population Data Sheet. 7. After viewing the film Pandora's Easy Open Pop-Top Box, or filmstrip, The Population Explosion,have the students write a paper on Projected Population of the World, or a selected country. Sources for Goal 6: Film: Pandora's Easy Open Pop-Top Box, 15', Environmental Control Administration. (free rental) Filmstrip: The Population Explosion, New York Times Film trips. Readings: Cook, R.C. and Lecht, J., People, pp 21-23 and 60-63. Ehrlich, P.R., The Population Bomb, pp 1-17 Newspaper Enterprise Assoc.,Inc., The World Almanac 1971. Population Reference Bureau, World Population Data Sheet. U.S. Bureau of Census, 1960 and 1970 Census of the Population-Characteristics of the Population.

GOAL 7: THE STUDENT WILL GENERALIZE FROM DATA THE ECONOMIC EFFECTS OF POPULATION GROWTH.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
RAPID POPULATION GROWTH AND ECONOMIC EFFECTS.	The student will generalize from data the economic effects of population growth.	1. After the students have read one of the following: Chapter 4 in This Crowded World; "Increasing the Food Supply" in People or "Can We Feed them All" in Public Affairs Pamphlet No. 393. Discuss the problem of food to feed millions of people being added to the population each year. 2. The teacher will explain the term Gross National Product and then the students will compare the per capita income or per capita Gross National Product with the percentage of population increase of various countries. Two sources are World Population Data Sheet and World Population Data in People. Possible questions are: a. What generalization can be made from this comparison? (high per capita income - low percentage increase) b. Why is Kuwait an exception to high income with low percentage population increase? c. What increase in annual income (disregarding inflation) must be made by each country so that the per capita income remains the same? d. What effect does a low per capita income have on the farming methods? e. Assume that all countries had a 3% increase in national income in non-inflated currency, and it is equally divided throughout the population. At the end of a year would each person in the United States have more money to spend? In Mexico? In Belguim? In Kenya? 3. Most of the developed countries have 30% or less of their population under 15 years of age, while most of the rest of the world has over 40% of their population in the same age group. Have students prepare reports on the following economic effects of this age distribution in population: a. Size of available labor force. b. Amount and types of expenditures needed for youth. c. Availability of women for the labor force.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
	(cont.)	4. Have the students write an essay on "The rich countries get richer while the poor become poorer." Emphasis should be on the effects of population increases. 5. After completing assigned reading in Too Many Americans, have the students list possible reasons why some business men and military leaders are interested in an expanding population. 6. Have the students do enabling research and debate the following position: "The United States must continue to populate in order to maintain economic superiority in the world." Sources for Goal 7: Coale, A.J. "Population and Economic Development" in Population Dilemma, Hauser, P.M. (ed.) pp 46-69. Cook, R.C. and Lecht, J., People, pp 45-49, 60-63. Day, L.H. and A.T., Too Many Americans, pp 133-154, 173-188. Ehrlich, P.R., The Population Bomb, pp 17-25. Frankel, L.B., This Crowded World, pp 43-51. Population Reference Bureau, World Population Data Sheet, (annually). Stewart, M.S., A New Look at our Crowded World, Public Affairs Pamphlet No. 393, pp 8-11.

GOAL 8: STUDENTS WILL CITE EVIDENCE TO SHOW THAT UNRESTRICTED POPULATION GROWTH MAY THREATEN OUR CIVILIZATION AND QUALITY OF LIFE.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
POPULATION AND NATURAL RESOURCES.	Students will cite evidence to show that unrestricted population growth may threaten our civilization and quality of life.	1. Divide the class into groups and assign each group one of the following topics as a project. To obtain information students should use the Readers' Guide to Periodial Literature as well as resources listed for this objective. Information should be obtained on the present status of the problem either world wide or by regions, reasons for the problems existence, possible courses of action and the groups recommendations. a. Food for 6 billion people in the year 2000. b. Water for our growing population. c. Industrialization with air and noise pollution. d. The availability of mineral resources including fossil fuels in the future. e. Open space for a nation with 300 million people. f. Pesticide and other poisoning the people of the world now live with. The group should make appropriate visual aids such as posters, pictures, charts, political cartoons, etc., to accompany their presentation. 2. Show one or several of the following filmstrips or films and discuss the main ideas. Filmstrips: The People Problem, Guidance Associates Man's Natural Environment: Crisis Through Abuse, Guidance Associates Crisis of the Environment, New York Times Sound Filmstrips Films: Air Pollution: Take a Deep Deadly Breath By Land, Sea and Air For All to Enjoy Population Ecology 1985

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
	(cont.)	3. After the students have read "Population Growth and the American Way of Life" in Too Many Americans, students should first identify the facets of "civilization" and a "quality" life style and then speculate on the possible effect of these because of excessive population. 4. Have the students write a paper on life in Dade County in 1985 with the projected population of 2 1/2 million people. They should identify both the benefits and deficits of a much larger population. (e.g. expanded cultural programs vs. overcrowded facilities) Sources for Goal 8: Filmstrips: Crisis of the Environment, New York Times Sound Filmstrips Man's Natural Environment: Crisis Through Abuse, Guidance Associates Squandered Resources, New York Times Sound Filmstrips The People Problem, Guidance Associates Films: Air Pollution: Take a Deep Deadly Breath, 54', McGraw Hill Contemporary Film (rental) By Land, Sea and Air, 31', Oil, Chemical and Atomic Workers International Union (rental) For All To Enjoy, 20', Conservation Foundation (rental) Population Ecology, 28', Encyclopedia Britannica (rental) 1985, (new acquisition, Dade County) Readings General): Commoner, Barry. Science and Survival, Viking Press, 1966. Day, L.H. and A.T. Too Many Americans, pp 45-74. Ehrlich, P.R. The Population Bomb, pp 28-49

FOCUS	OBJECTIVE	LEARNING ACTIVITIES

Readings General: (cont.)

Jarrett, H. (ed.) Environmental Quality in a Growing Economy, John Hopkins Press, 1966.
Myrdal, Gunnar. The Challenge of World Poverty: A World Anti-Poverty Program. New York: Pantheon, 1970.
Taylor, R.G. The Biologis Time Bomb. World, 1968.
Udall, S.L. The Quiet Crisis. Holt, Rinehart and Winston, 1963.
Wagner, P.L. The Human Uses of Earth. Free Press, 1960.

Readings (Food):

Bhote, K.R. "The Silent Struggle" in the World Book Yearbook 1966.
Bogstrom, G. The Hungry Planet, Collier Books, 1967.
Brown, Lester. The Seed of Change: The Green Revolution and Development in the 1970's. New York: Praeg r, 1970.
Buck, P.S. "Awakening the Land" in the World Book Yearbook,1965.
Cook, R.C. and Lecht, J. People. pp 38-49.
Frankel, L.B. This Crowded World pp 16-18, 44-45.
Hopcraft, A. Born to Hunger Houghton Mifflin, Boston.
Stewart, M.S. A New Look at Our Crowded World pp 8-11.
Synopsis, The Politics of World Hunger.

Readings (Water):

Atkinson, B. "Polluted America" in The World Book Yearbook 1966.
Carr, D.E. Death of the Sweet Water, Norton, 1966.
Commoner, Barr. "The Killing of a Great Lake" in The World Book Yearbook 1966.
Marx, W. The Frail Ocean, A Sierra Club/Ballantine Book, 1967.
Milne, Lorus and Magery, "Water for a Thirsty World" in the World Book Yearbook, 1966.
Stewart, G.R. Not So Rich as You Think, Houghton-Mifflin, 1968.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES

Readings: (cont.)

Readings (air and noise):

Atkinson, B. "Polluted America" in the World Book Yearbook 1966.
Berland, T. "Up to our Ears in Noise" in the World Book Yearbook 1970.
Burns, William. Noise and Man, London: Murray, 1968
Edelson, Edward. Poisons in the Air, Pocket Books 1966.
Goldman, M. (ed.) Controlling Pollution: The Economics of a Cleaner America, Prentice Hall 1967.
Osborn, F. Our Plundered Planet, Pyramid Publications, 1970.
Rodda, M. Noise and Society, Benjamin, 1967.
Stern, A.C. Air Pollution, Academia Press, 1968.

Readings (Open Space):

Bates, M. The Forest and the Sea, Vintage Books, 1960.
Dasmann, R.F. A Different Kind of Country, Macmillan, 1968.
Fein, A. Landscape into Cityscape, Cornell Univ. Press, 1967.
Kilgore, B.M. Wilderness in a Changing World, Sierra Club/Ballantine, 1969.
Leighty, J. "Our Troubled Parks" in The Miami Herald, May 16, 1971, pages M1-3.
McHarg, I. Design with Nature, Natural History Press, 1969.
Schwartz, William, (ed.) Voices for the Wilderness, Sierr Club/Ballantine, 1969.

Readings (Resources):

Brown, H., Bonner, J., and Weir, J. The Next Hundred Years, Viking, 1957.
Dewhurst, F.S. and Associates, America's Needs and Resources: A New Survey, Twentieth Century Fund, New York, 1955.
Landsberg, H.H. and Schurr, S.H. Energy in the United States: Sources, Uses, and Policy Issues. 1968.
Osborn, F. Our Plundered Planet, Little, Brown, 1948.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES

Readings: (cont.)

Readings (Resources - cont.):

Packard, Vance, The Waste Makers, Pocket Books Inc. 1963.
Wengert, N. Natural Resources and the Political Struggle, Random House, 1955.

Readings (Pesticides):

Carson, Rachel, Silent Spring, Houghton Mifflin, 1962.
Graham, F. Since Silent Spring, Houghton Mifflin, 1970.
Melhanby, K. Pesticides and Pollution, Collins, 1967.
Rudd, R.L. Pesticides and the Living Landscape, Univ. Of Wisconsin Press, 1964.

GOAL 9: THE STUDENT WILL PREDICT THE ACTIONS OF NATIONS TO STABILIZE POPULATION.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
FAMILY PLANNING	The student will predict the actions of nations to stabilize population.	1. Show one of the following films: Multiply and Subdue the Earth People by the Billions (Dade County Film on order) Discuss the ideas and determine if the students thin there is a popultion problem in the world today. 2. Obtain and distribute copies of Henry C. Wallich's article in Newsweek of June 29, 1970. Discuss his arguments against population stabilization in the United States. 3. After the students have read articles by Philip Meyer and Frank Soler, from the Miami Herald, and Chapters 11 and 12 in Population: The Vital Revolution, they should list and discuss methods advocated by various governments to limit or increase the size of families. 4. Have the students write a "letter to the editor" to be turned in to the teacher either advocating or prohibiting governmental intervention in family size for the citizens; or assign a group of students to debate the question. 5. Paul Ehrlich in Chapter 4 of The Population Bomb advocates a program for action. Have the students read this chapter and critically discuss his suggestions such as tax incentive plans, responsibility prizes, allocation of aid to certain countries, and more governmental control of industry. Have students suggest other alternatives of action. 6. Have the students write an essay on"My Population Policy for the United States." Sources for Goal 9: Films: Multiply and Subdue the Earth, 60', Univ. of Indiana A-V center. People by the Billions. 28', McGraw Hill Contemporary Film. (Dade County Film on order)

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
		Sources: (cont.) Readings: Day, L.H. and A.T. Too Many Americans, pp 219-246. Ehrlich, P.R. The Population Bomb, Chapter 4. Freedman, Ronald (ed.) Population: The Vital Revolution, Chapters 11-19. Meyer, Philip. "Government Urges Limit of 2 Children Per Family." Miami Herald, May 2, 1971, Page D-1. Soler, Frank. "Can Latin America Stop Chaos of Over-Population?" Miami Herald, June 25, 1971, Page E-1. Stewart, M.S. A New Look at Our Crowded World, pp 18-23. Wallich, H.C. "On Population Growth." Newsweek, June 29, 1970, page 66.

GOAL 10: THE STUDENT WILL SUGGEST SOLUTIONS TO THE CURRENT POPULATION PROBLEM.

FOCUS	OBJECTIVE	LEARNING ACTIVITIES
STUDENT SOLUTIONS AND ATTITUDES	The student will suggest solutions to the current population problem.	1. As a review activity have students complete crossword puzzle. (See Appendix D) 2. Students will list the aspects of the population problem and suggest one solution to each that he supports (e.g. availability of family planning information, tax incentives, etc.) 3. Student complete the Population Questionnaire as a post evaluation. (See Appendix A)

APPENDIX A

POPULATION QUESTIONNAIRE

DIRECTIONS: Do NOT put your name on the paper. This questionnaire is designed to measure your awareness of population problems. It is also an attempt to measure your attitude toward vital issues connected to population. Please indicate your answer by checking or circling your answer.

1. Here are some countries that have different rates of population growth. After each one indicate whether you think it is growing faster, slower, or about the same as the United States.

	Faster	Slower	Same	Don't Know
A. Brazil				
B. England				
C. India				
D. Japan				
E. U.S.S.R.				

2. (a) What do you think is the annual rate of growth for the U.S. population? (b) Do you feel it is a serious problem?

   (a) _____%
   (b) Yes No No opinion

3. (a) Do you think the annual rate of growth for the world is greater or less than the United States? (b) Do you consider it to be a serious problem?

   (a) Greater Less
   (b) Yes No No opinion

4. (a) Which do you think is the more serious problem in the United States, population growth or crime?

   (a) Crime (b) Population (c) The same (d) Don't know

   (b) Which do you think is the more serious problem in the United States, population growth or racial discrimination?

   (a) Population (b) Racial discrimination (c) The Same (d) Don't know

5. Do you feel that the United States government should give aid to states and cities for birth control programs if they request it?

   Yes No No opinion

6. (a) Do you think our government should help other nations with their birth control programs, if they ask?

   Yes No No opinion

6. (b) If yes, would this include furnishing birth control supplies?

Yes No No opinion

7. The following is a list of seven possible reasons why a woman might have a pregnancy interrupted. Indicate after each reason whether you think it would be all right for a woman to have an abortion.

	Yes	No	No Opinion
A. Endangered woman's health			
B. Rape			
C. Incest			
D. Not married			
E. Can't afford child			
F. Doesn't want child			

8. As you may know, a few states have recently enacted laws that make it legal for a woman to have an abortion. (For reasons in Question #7 and others) On the whole, do you approve of such laws or not?

Yes No No opinion

9. Do you believe that information about birth control ought to be easily available to any married person who wants it?

Yes No No opinion

10. Do you believe that information about birth control ought to be easily available to any single adult person who wants it?

Yes No No opinion

11. What sex are you? Male Female

12. How many brothers and sisters do you have? Brothers_____ Sisters_____

13. How many children do you think a family should have?_____

14. Of which of the following social/economic classes do you consider yourself a member?

(a) Upper (b) Upper middle (c) Middle (d) Lower middle

(e) Working class

Population Questionnaire (cont.)

Read the following statements. If you agree strongly use ++; if you agree use +; if you have no opinion use ; if you disagree use -; if you disagree strongly use --.

15. Each couple has the right to have as many children as they desire.

16. Each government should develop a population policy controlling its nations size.

17. Each child born has the right to have the necessary food for maximum level of health.

18. A couple should be told how many children they should have for their family.

19. Each child born is a gift.

20. A couple should have as many children as they can afford.

21. An only child is a spoiled child.

22. A government has the right to tell a couple the number of children they may have.

23. A government should take away the tax exemption for families with more than two children.

24. It makes little difference to the increase of population if a family has two or three children.

25. The government has the right to prevent certain people such as the feeble minded from having children.

26. Countries which can produce enough food should be allowed as large a population as they want.

27. All families should have at least two children.

28. The United States should adopt a policy of unlimited immigration in order to permit overpopulated nations to send citizens here.

29. A better use of the open or agricultural land surrounding cities is for the development of parks.

30. There is a relationship between the number of people and the amount of pollution.

31. A better use of the open or agricultural land surrounding the cities is for the building of homes.

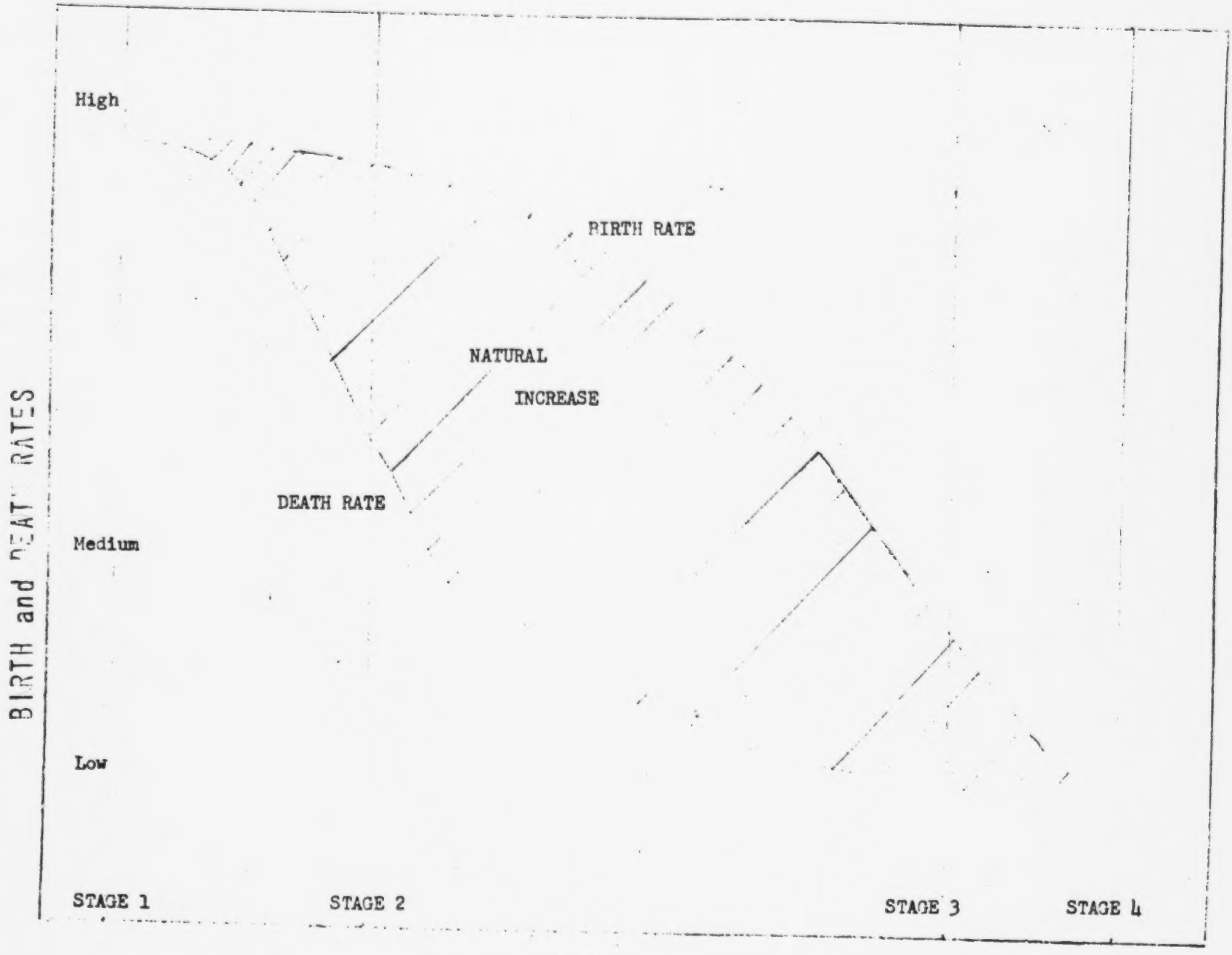
32. The world is running out of space.

33. The world is running out of food.

34. Population control must be accomplished.

APPENDIX C

THE DEMOGRAPHIC TRANSITION



APPENDIX B

CARRYING CAPICITY

by

Paul Ehrlich

Suppose we put gelatin nutrient, bananas, and a pair of fruit flies into a bottle. The fruit flies breed, their offspring breed and the population builds up. Eventually, the population becomes so large that the excreta of the flies fouls the medium and the food supply diminishes to a critical level. The fly population dies off or dies back to a lower level. By increasing the size of the bottle or putting more food into it, we haven't removed any natural controls; we have only temporarily increased the carrying capacity of the environment. Eventually the flies will again overshoot the carrying capacity of the bottle and die. Man's technology has temporarily expanded the carrying capacity of the earth, but increasing that capacity without population control only guarantees that a larger number of people will die in misery than would have died if we hadn't increased the carrying capacity.

APPENDIX D

CROSSWORD PUZZLE

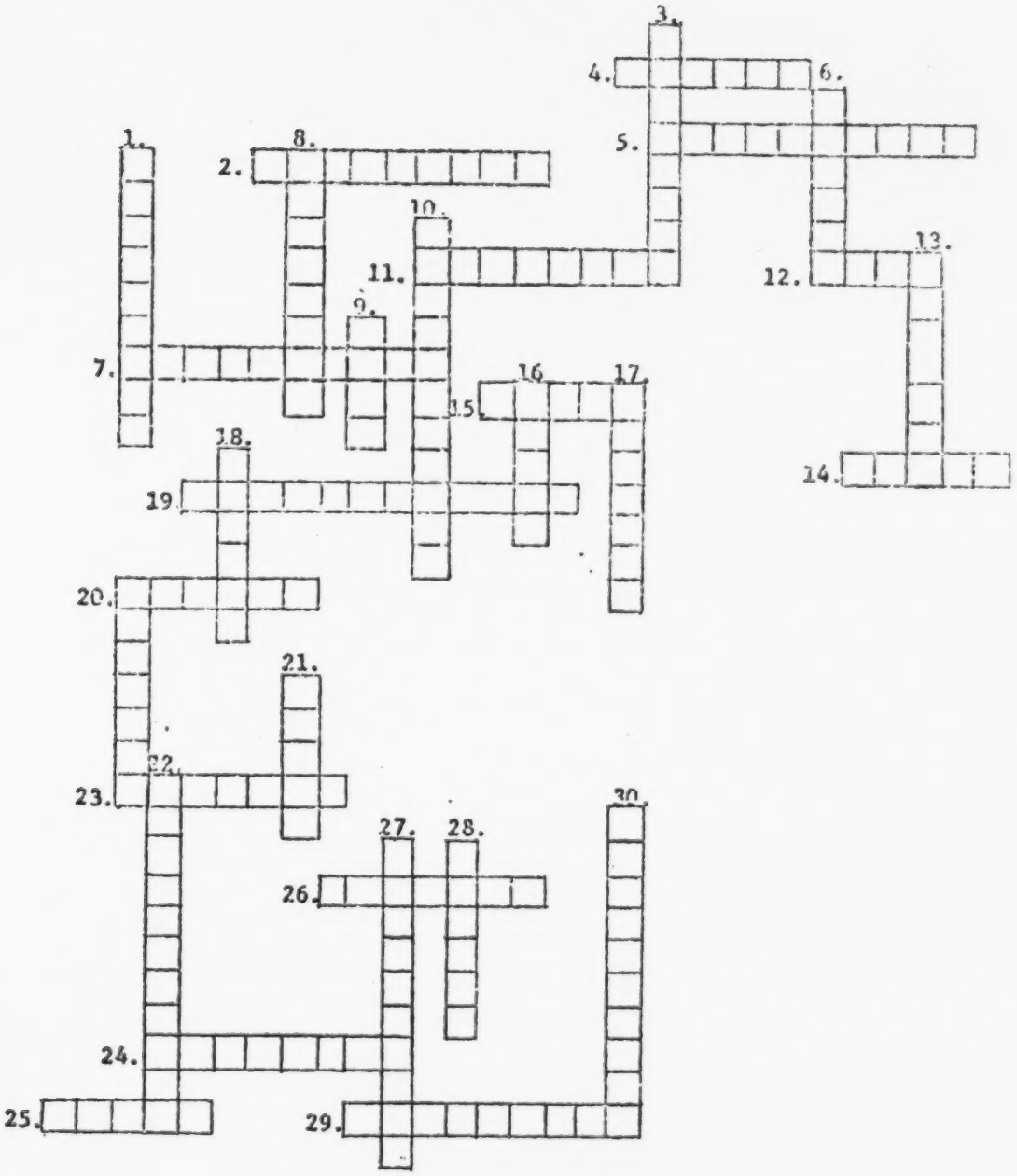
DOWN

1. Damage to the air and water of our environment. (Pollution)
3. A communicable disease that spreads through the population. (epidemic)
6. A very serious problem. (crisis)
8. Concerning movement of people. (mobility)
9. A large group of people living in close quarters. (city)
10. A group of urban areas joined together. (megalopolis)
13. A type of person who moves from one place to another. (migrant)
16. An area under 2,500 people usually containing farms. (rural)
17. The type of increase using births and deaths. (natural)
18. A counting of people by the U.S. government. (census)
20. A type of worker who has some technical training of skills. (skilled)
21. A rate found by dividing the population into the number of babies born. (birth)
22. Physical surroundings of man. (environment)
27. Refers to numbers of people. (population)
28. Problems of recreation, housing, etc. (social)
30. Number of years a person hopes to live. (expectancy)

ACROSS

2. A person coming into a country. (immigrant)
4. An urban area that is spread out. (sprawl)
5. The scientific study of a population. (demography)
7. A type of revolution that mechanized production. (industrial)
11. Referring to how one makes a living and how land is utilized. (economic)
12. An area with degraded houses, etc. (slum)
14. The type of registration that records births and deaths. (vital)
15. An area containing more than 2,500 people. (urban)
19. An area containing urban and suburban and rural areas (only a little). (metropolitan)
20. An area on the outskirts of an urban area (central city). (suburb)
23. The number of people divided into the amount of land. (density)
24. A person who moves out of the country. (emigrant)
25. A rate that shows the proportion of people who have died. (death)
26. Having to do with the condition of the environment. (ecology)
29. A group of people who have common interests and live in the same area. (community)

CROSSWORD PUZZLE



I. SUGGESTED STUDENT MATERIALS:

Coale, A.J., "Population and Economic Development" in Population Dilemma, Hauser, P.M., ed. Houghton Mifflin Co., 1968.

*Cook, Robert, and Lecht, Jane, People. Washington D.C.: Columbia Books, 1968.

Day, Lincoln H. and Day Alice T., Too Many Americans, New York: Dell, 1964.

Ehrlich, Paul R., The Population Bomb, New York: Ballantine Books, 1971.

*Frankel, Lillian B., This Crowded World, Washington, D.C.: Columbia Books, 1970.

Freedman, Ronald, Population: The Vital Revolution, Garden City, New York: Doubleday & Co., 1964.

Glick, P.C., "The 1960 Census as a Source for Social Research," American Sociological Review, Aug. 1962, pp 581-585.

Langer, W.L., "The Black Death," Scientific American, Feb. 1964, pp 114-121.

Malthus, T.R., Population: The First Essay, Ann Arbor, Michigan: Ann Arbor Paperbacks, 1964.

Malthus, T.R., Huxley, J. and Osborn, F., Three Essays on Population, New York: New American Library (Mentor Books) 1960.

Marx, Karl, Das Kapital, Chicago: Charles H. Kerr and Co., 1907.

Meyer, Phillop, "Government Urges Limit of 2 Children Per Family," Miami Herald, May 2, 1971.

National Center for Health Statistics, Vital Statistics of the United States (Annually).

The World Almanac, Newspaper Enterprise Assoc. Inc., 1971.

Price, Daniel, ed. The 99th Hour: The Population Crisis in the United States, Chapel Hill: Univ. of North Carolina Press, 1970.

Soler, Frank, "Can Latin America Stop Chaos of Over-Population?" Miami Herald, June 25, 1971.

Stewart, Maxwell S., A New Look at Our Crowded World, Public Affairs Pamphlet No. 393, New York, N.Y.: Public Affairs, 1966.

U.S. Bureau of the Census, Historical Statistics of the United States Colonial Times to 1957 and Its Continuation to 1962 and Revisions.

U.S. Bureau of the Census, "Lifetime Migration Histories of the American People," Current Population Reports, Series P-23,#25, March 8, 1968.

U.S. Bureau of the Census, Statistical Abstract of the United States, (Annually).

Wallich, H.C., "On Population Growth," Newsweek, June 29, 1970.

Whelpton, P.K., Campbell, A.A., and Patterson, J.E., Fertility and Family Planning in the United States, Princeton, New Jersey: Princeton University Press, 1966.

World Population Data Sheet - Information Service, Population Reference Bureau, Washington, D.C. (annually).

Zinsser, Hans, Rats, Lice and History, New York: Bantam, 1967.

_____,Expanding Tables and Graph Skills, Book D. Columbus, Ohio: American Education Publications (Xerox), 1970.

_____, The Population Dilemma, Washington, D.C.: Columbia Books, (Available in late 1971).

* Recommended Texts

II. SUGGESTED TEACHER MATERIALS

Hauser, Philip, ed., The Population Dilemma, Englewood Cliffs, New Jersey: Prentice Hall, 1963.

Nam, Charles, ed., Population and Society, Boston: Houghton Mifflin, 1968.

National Center for Health Statistics, Vital Statistics of the United States, (annually).

*Thomlinson, Ralph, Population Dynamics, New York: Random House, 1965.

Thompson, Warren S. and Lewis, David T., Population Problems, New York: McGraw-Hill, 1960.

United Nations, The Demographic Yearbook of the United Nations, New York, (annually).

U.S. Bureau of the Census, Current Population Reports.

_____, U.S. Census of Population 1960 and 1970, Characteristics of the Population, Vol. 1, Part 1, United States and individual states.

_____, Statistical Abstract of the United States, (annually).

_____, Historical Statistics of the United States Colonial Times to 1957 and its Continuation to 1962 and Revisions.

Whelpton, P.K., Campbell, A.A., and Patterson, J.E., Fertility and Family Planning in the United States, Princeton, New Jersey: Princeton University Press, 1966.

_____, Synopsis, "The Politics of World Hunger," Vo. 1, No. 12, March 2, 1970.

Congressional Quarterly Classroom Publications, Man's Control of the Environment.

III. AUDIO-VISUAL AIDS

Filmstrips:

Crisis of the Environment, New York Times Filmstrips
Man, Builder of Cities, Encyclopedia Britannica Education Corp.
Man's Natural Environment: Crisis Through Abuse, Guidance Associates
The People Problem, Guidance Associates
The Population Explosion, New York Times Filmstrips
Squandered Resources, New York Times Sound Filmstrips

Dade County Films:

Cities and How They Grow, 11; BW #1-00333
The City, 30' BW #1-31303
The City and The Future, 28' BW #1-31223
The City: As Man's Home, 28' BW #1-31225
1985, New Acquisition
Megapolis, Cradle of the Future, 22' #1-10122
People By The Billions, New Acquisition
The Squeeze, New Acquisition

III. (cont.)

Simulation Game

Balance Interact Simulations, A Simulation of Short Range Economic - Hedonistic Goals vs. Long Range Environmental Goals.

Films (Rental):

The Earth and Mankind, Series of six films, 28' each. McGraw Hill Contemporary Film Rental, 330 West 42nd Street New York, New York, 10036.

- Challenge to Mankind
- Man and His Resources
- To Each a Rightful Share
- The Global Struggle for Food
- Can the Earth Provide?

First Mile Up, 28'. McGraw Hill Contemporary Film Rental.

Poisons, Pests and People, 55'. McGraw Hill Contemporary Film Rental.

Air Pollution: Take A Deep Deadly Breath, 54'. Color. Same as above.

The Population Problem, Series produced by NET. Sales and Rental agent: NET Film Service, Indiana University, Audio-Visual Center, Bloomington, Indiana, 47401.

- India: Writings in the Sand, 60' BW
- Brazil: The Gathering Millions, 60' BW
- Japan: Answer in the Orient, 60' BW

Multiply and Subdue the Earth, 60' BW or Color. Indiana Univ. Audio-Visual Center, Bloomington, Ind., 47401.

Extension Media Center, University of California, Berkeley, Calif. 94720.

- Cities in Crisis, 22' Color, order # 6812.
- Clean Waters, 20' Color, order # 3972.
- Noise: New Pollutant, 30' BW, order # 7503.

Encyclopedia Britannica Educational Corporation, 425 North Michigan Ave. Chicago, Ill. 60611.

- Population Ecology, 19' Color.
- The Balitmore Plan, 20' Describes housing improvements by the cooperation of municipal agencies and citizens.
- The Living Cities, 25' Reveals the needs for urban redevelopment in a cross-section of American cities.
- Our Changing Environment, 17' Color.
- Our Crowded Environment, 11 ' Color.
- Air Pollution, 15' Color.
- Water Pollution, 15' Color.

III. (cont.)

Stuart Finley Productions, 3428 Mansfield Road, Falls Church, Va. 22041.

Crisis on Kanawha, 20' Color. Shows sources of industrial water pollution and some methods of eliminating it.

Green City, 23' Color. Civic action to preserve green space and open space as cities grow.

Beargrass Creek, 19' Color. the poignant tragedy of a small tributary stream, its promising start, and its sad end due to pollution.

By Land, Sea and Air, 31' Color. Oil, Chemical and Atomic Workers Int. Union. Effects of pesticides on farm workers and environment in Calif. 1126-16th Street, N.W. Washington, D.C. 22036.

The Time of Man, 50'. Produced by Metromedia in cooperation with The American Museum of Natural History, Central Park West at 79th Street,New York, New York, 10024. It is a thoughtful exposition of the basic meaning of the word "environment."

For All To Enjoy, 20' Color. Conservation Foundation 1250 Connecticut Ave. N.W. Washington, D.E. 20036. Satirical approach to uncontrolled development in National Parks.

Environmental Control Administration, 12720 Twinbrook Parkway, Rockville, Maryland 20852.

Pandora's Easy Open Pop-Top Box, 15' Color. A presentation of the effects of uncontrolled urbanization.

The Third Pollution, 30' Color. Film describes America's $4 billion solid waste problem.

The Poisoned Air, 60 ' BW. CBS documentary. Carousel Films Inc. 1501 Broadway, New York, New York,10036.

Coronet Films, 65 E. South Water Street, Chicago, Illinois, 60601.

Cities, Why They Grow, 11'. Pictures the economic factors which gave rise to the growth of cities.

Population Patterns in the United States, 11'. Delineates today's dynamic and changing population patterns as shown in the 1960 census.

Tom Lehrer Sings Pollution, 9' BW. Public Health Service Audio Visual Facility, Atlanta, Georgia, 30333.

IV. STUDENT SUPPLEMENTARY READINGS:

Atkinson, B. "Polluted America" in the World Book Yearbook 1966. Chicago: Field Enterprises, 1966.

Bates, M. The Forest and the Sea. Westminister, MD: Vintage Books, 1960.

Berland, T. "Up to our Ears in Noise" The World Book Yearbook 1970, Chicago: Field Enterprises 1970.

Bhote, K.R. "The Silent Struggle" the World Book Yearbook 1966, Chicago: Field Enterprises, 1966.

Bogstrom, G. The Hungry Planet. New York: Collier Books, 1967.

Brown, H., Bonner, J., and Weir, J. The Next Hundred Years, New York: Viking, 1957.

Brown, Lester. Seeds of Change: The Green Revolution and Development in the 1970's. New York: Praegar, 1970.

Buch, P.S. "Awakening the Land."The World Book Yearbook 1965, Chicago: Field Enterprises, 1965.

IV. (cont.)

Burns, William. Noise and Man. London: Murray, 1968.
Carr, D.E. Death of the Sweet Water. New York: Norton, 1966.
Carson, Rachel. Silent Spring. Boston: Houghton Mifflin, 1962.
Commoner, Barry. "The Killing of a Great Lake" The World Book Yearbook 1966, Chicago: Field Enterprises, 1966.
Commoner, Barry. Science and Survival. New York: Viking Press, 1966.
Dasmann, R.F. A Different Kind of Country. New York: Macmillan, 1968.
Defoe, Daniel. History of the Great Plague in London. Boston: Ginn & Co., 1896.
Dewhurst, F.S. and Associates. America's Needs and Resources: A New Survey. New York: Twentieth Century Fund, 1955.
Dickens, Charles. Tale of Two Cities, London: The Zodiac Press, 1948.
Edelson, Edward. Poisons in the Air. New York: Simon & Schuster, Inc., 1966.
Fein, A. Landscape into Cityscape. Ithaca,New York: Cornell Univ. Press, 1967.
Goldman, M., ed. Controlling Pollution: The Economics of a Cleaner America. Englewood Cliffs, N.J.: Prentice-Hall, n.d.
Graham, F. Since Silent Spring. Boston: Houghton Mifflin, 1970.
Haggard, H.W. Devils, Drugs and Doctors. New York: Harper & Brothers, 1929.
Hopcraft, A. Born To Hunger. Boston: Houghton Mifflin, 1968.
Jarrett, H., ed. Environmental Qualaty in a Growing Economy. Baltimore, MD: John Hopkins Press, 1966.
Kilgore, V.M. Wilderness in a Changing World. New York: Sierra Club/Ballantine, 1969.
Landsberg, H.H. and Schurr, S.H. Energy in the United States: Sources, Uses, and Policy Issues. New York: Random House, 1968.
Leighty, J. "Our Troubled Parks" The Miami Herald. May 16, 1971, pages M1-3.
McHarg, I. Design with Nature. Garden City, N.Y.: Natural History Press, 1969.
Marx, W. The Frail Ocean. New York: A Sierra Club/Ballantine Book, 1967.
Melhanby, K. Pesticides and Pollution. New York: Collins, 1967.
Milne, Lorus and Magery. "Water for a Thirsty World," The World Book Yearbook 1966. Chicago: Field Enterprises, 1966.
Myrdal, Gunnar. The Challenge of World Poverty: A World Anti-Poverty Program. New York: Pantheon, 1970.
Ozborn, F. Our Plundered Planet, New York: Pyramid Publications, 1970.
Packard, Vance. The Waste Makers. New York: Simon & Schuster, Inc., 1963.
Pepys, Samuel. Diary. Vol. IV. London: G. Bell & Sons, 1924.
Rodda, M. Noise and Society. New York: Benjamin, 1967.
Rudd, R.L. Pesticides and the Living Landscape. Madison, Wis: Univ. Of Wisconsin, 1964.
Schwartz, William, ed. Voices for the Wilderness. New York: Sierra Club/Ballantine, 1969.
Stern, A.C. Air Pollution. Oshkosh, Wis: Academia Press, 1968.
Stewart, F.R. Not So Rich as You Think. Boston: Houghton-Mifflin Co., 1968.
Taylor, R.G. The Biologist Time Bomb. New York: World, 1968.
Udall, S.L. The Quiet Crisis. New York: Holt, Rinehart and Winston, 1963.
Wagner, P.L. The Human Uses of Earth. New York: 1960.
Wengert, N. Natural Resources and the Political Struggle. New York: Random House, 1955.

V. TEACHER SUPPLEMENTARY READINGS:

Bookchin, M. How Many People: The Myth in the Population Movement. New York: Simon & Schuster, 1970.

Bredemeir, Harry and Jackson, Toby. Social Problems in America. New York: John Wiley and Sons, Inc., 1966.

Coale, Ansley J. and Melvin Zelnik. New Estimates of Fertility and Population in the United States. Princeton: Princeton University Press, 1963.

Elias, Jr., C.E. Metropolis: Values in Conflict, Belmont, California: Wadsworth Pub., 1967.

Freedman, Ronald. "The Transition from High to Low Fertility: Challenge to Demographers," Population Index, Vol. 31, October, 1965.

Goldschmidt, Walter. Exploring the Ways of Mankind. New York: Holt, Rinehart, and Winston, Inc., 1960.

Guttmacher, Alan F. Babies by Choice or by Chance. New York: Avon Books, 1961.

Helfrich, J.W. Jr., ed. The Environmentel Crisis: Man's Struggle to Live with Himself. New Haven, Conn: Yale University Press, 1970.

Herr, David M., ed. Readings on Population. Englewood Cliffs, N.J.: Prentice-Hall Inc. 1968.

Lowery, Ira S. Migration and Metropolitan Growth: Two Analytical Models. San Francisco: Chandler Publishing Co., 1966.

Rainwater, Lee. And the Poor Get Children. Chicago: Quadrangle Books, 1960.

Ridgeway, James. "One Million Abortions." Current Perspectives on Social Problems, ed. by Judson R. Landis, Belmont, Calif: Wadsworth, 1966.

Spengler, Joseph J., and Otis D. Duncan, eds. Population Theory and Policy, Selected Readings. New York: The Free Press, 1956.

Stockwell, Edward G. Population and People. Chicago: Quadrangle Books, 1968.

Thomas, Dorothy Swaine, "International Migration," in Philip M. Hauser, ed. Population and World Politics. New York: The Free Press, 1958.

U.S. Bureau of the Census, "Vital Statistics," World Population Conference, 1965. Vol. IV, New York: United Nations, 1967.

Way, H. Frank, Jr. "Birth Control: A New Concensus," Current Perspectives on Social Problems, ed. by Judson R. Landis. Belmont, Calif: Wadsworth, 1966.

_____, Problems of American Society: Air and Water Pollution. New York: Simon & Schuster Inc., n.d.

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American Assoc. of University Women 2401 Virginia Ave. N.W. Washington, D.C. 20036	Resource directory on pollution control. Anti-pollution pamphlets and study guide.
Environment Magazine 438 N.Skinker St. Louis, Missouri 63130	Monthly publication dealing with effects of technology on the environment. (Student subscription)
Isaac Walton League of America 1326 Waukegan Road Glenview, Ill. 60025	Monthly conservarion newsletter Pamphlet on water pollution, "Clean Water-It's Up to You"
National Parks Assoc. 1701 18th St. N.W. Washington, D.C. 20036	Free or low-cost pamphlets and articles on all types of pollution and basic ecology.
National Wildlife Federation 1412 16th St. N.W. Washington, D.C. 20036	Conservation Directory Informational packets on ecology Monthly newsletter
Planned Parenthood, World Population 515 Madison Ave. New York, N.Y. 10022	Bibliography, film guide and reprints "Eco-Catastrophe" by P.Ehrlich "300 Million Americans Would Be Wrong" by D.Lilienthal "The Human Race Has Maybe 35 Years Left" by D.Lyle.
Population Reference Bureau 1755 Massachusetts Ave. N.W. Washington, D.C. 20036	Good bibliography, source list and film guide on population. Low cost.
Projects Man's Enviroment National Education Assoc. 1201 16th St. N.W. Washington, D.C. 20036	Information on curriculum (K thru 12) and enviromental study areas.
Sierra Club Mills Tower San Francisco, Cal. 94104	List of publications, pollution and population information, protection of scenic areas.
Superintendent of Documents Government Printing Office Washington, D.C. 20402	"No Laughing Matter" cartoons on air and water pollution. "From Sea to Shining Sea" Presentation of enviromental situation of U.S. with resource guide.
The Wilderness Society 729 15th St. N.W. Washington, D.C. 20005	Reports pamphlets and reprints on preservation and use of our natural heritage.

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